ABSTRACT

In accordance with an embodiment of the present invention an improved equalization system for DMT based modem receiver is provided. It includes a time domain equalizer for processing samples from an analog front end and includes a device for computing differences of time domain samples for every frame and the results are saved. An FFT is provided for calculating a first FFT and the results are saved in a FFT buffer so that at each DMT frame, after a difference and FFT operation, the FFT buffer contains the first FFT and v-1 time domain sample differences. A sliding FFT for each tone reads the first FFT result and v-1 FFTs and recursively computes the rest of v-1 FFTs for the particular tone. An equalizer is responsive to the computed sliding FFT for recursively computes equalizer outputs.